

Serial No. 09/929,048

Docket No.: 1614.1179

**IN THE CLAIMS:**

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strike through~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please CANCEL claims 11, 16, 17, 20 and 21 AMEND claims 1, 12, 15, and 18-20 and ADD new claim 22 in accordance with the following:

1. (PREVIOUSLY PRESENTED) A plasma display device having first and second substrates and a discharge gas filled therebetween, the plasma display device comprising:  
first and second electrodes extending in parallel to each other on the first substrate; and  
first and second discharge electrode parts extending from the first and second electrodes, respectively, so as to oppose each other; and  
a plurality of partition walls formed on the second substrate so as to extend perpendicularly to the first and second electrodes, the partition walls each separating an array of the first and second discharge electrode parts from an adjacent array of the first and second discharge electrode parts, wherein  
a discharge gap of a substantially constant width is formed between opposing, first and second discharge electrode parts, the discharge gap being defined by first and second edge parts of the opposing first and second discharge electrode parts, respectively;  
the first and second edge parts have lengths longer than widths of the first and second discharge electrode parts, the widths being measured in directions in which the first and second electrodes extend, respectively;  
the first edge part forms an angle  $\theta$  with respect to the direction in which the first electrode extends, the angle  $\theta$  satisfying a condition:  $30^\circ \leq \theta \leq 60^\circ$ ; and  
the width of each of the first and second discharge electrode parts is 120  $\mu\text{m}$  or less;  
and  
the first and second discharge electrode parts extend toward each other in parallel with, but not overlapping, the partition walls.

2. (ORIGINAL) The plasma display device as claimed in claim 1, wherein the discharge gap has a length longer than or equal to 150  $\mu\text{m}$  and shorter than 200  $\mu\text{m}$ .

Serial No. 09/929,048

Docket No.: 1614.1179

3. (ORIGINAL) The plasma display device as claimed in claim 1, wherein:  
the first edge part extends obliquely with respect to the direction in which the first electrode extends; and  
the second edge part extends substantially parallel to the first edge part and obliquely with respect to the direction in which the second electrode extends.

4. (CANCELLED)

5. (ORIGINAL) The plasma display device as claimed in claim 1, wherein the first and second edge parts are defined by a plurality of sides forming angles with respect to the direction in which the first and second electrode extend, respectively.

6. (ORIGINAL) The plasma display device as claimed in claim 1, wherein:  
the first edge part has a convex shape; and  
the second edge part has a concave shape matching the first edge part.

7. (PREVIOUSLY AMENDED) The plasma display device as claimed in claim 1, wherein:  
the first and second electrodes are repeatedly formed alternately; and  
the first discharge electrode parts extend from first and second parallel sides of the first electrode and the second discharge electrode parts extend from first and second parallel sides of the second electrode.

8. (ORIGINAL) The plasma display device as claimed in claim 7, wherein each of the first discharge electrode parts includes first and second electrode patterns extending from the first and second sides of the first electrode, respectively, the first electrode pattern forming a first discharge gap with one of the second discharge electrode parts which one opposes the first electrode pattern, the second electrode pattern forming a second discharge gap with one of the second discharge electrode parts which one opposes the second electrode pattern, the second discharge gap being substantially equal to the first discharge gap in size.

9. (PREVIOUSLY PRESENTED) The plasma display device as claimed in claim 1, wherein:  
the discharge gap has a length longer than or equal to 150  $\mu\text{m}$  and shorter than 200  $\mu\text{m}$ ;

Serial No. 09/929,048

Docket No.: 1614.1179

a gap formed between each of the first and second discharge electrodes parts and the partition wall adjacent thereto is 90  $\mu\text{m}$  or greater; and  
the partition walls are formed with a pitch of 360  $\mu\text{m}$ .

10. (PREVIOUSLY PRESENTED) The plasma display device as claimed in claim 9, wherein the width of the discharge gap is 100  $\mu\text{m}$ .

11. (CANCELLED)

12. (CURRENTLY AMENDED) ~~The plasma display device as claimed in claim 11,~~  
wherein: A plasma display device having first and second substrates and a discharge gas filled therebetween, comprising:  
first and second electrodes extending in parallel to each other on the first substrate; and  
first and second discharge electrode parts extending from the first and second electrodes, respectively, so as to oppose each other; and  
a plurality of partition walls formed on the second substrate so as to extend perpendicularly to the first and second electrodes, the partition walls each separating an array of the first and second discharge electrode parts from an adjacent array of the first and second discharge electrode parts, wherein:  
a discharge gap of a substantially constant width is formed between the opposing first and second discharge electrode parts, the discharge gap being defined by first and second edge parts of the opposing first and second discharge electrode parts, respectively;  
the first and second edge parts have lengths longer than widths of the opposing first and second discharge electrode parts, the widths being measured in respective directions in which the first and second electrodes extend;  
the first and second edge parts are defined by a plurality of straight line segments forming angles with respect to the respective directions in which the first and second electrodes extend;  
the first and second discharge electrode parts extend toward each other in parallel with, but not overlapping, the partition walls;  
the discharge gap has a length longer than or equal to 150  $\mu\text{m}$  and shorter than 200  $\mu\text{m}$ ;  
a gap formed between each of the first and second discharge electrode parts and the partition wall adjacent thereto is 90  $\mu\text{m}$  or over; and  
the partition walls are formed with a pitch of 360  $\mu\text{m}$ .

Serial No. 09/929,048

Docket No.: 1614.1179

13. (PREVIOUSLY PRESENTED) The plasma display device as claimed in claim 12, wherein the width of the discharge gap is 100  $\mu\text{m}$ .

14. (PREVIOUSLY PRESENTED) The plasma display device as claimed in claim 1, wherein:

the discharge gap has a length longer than or equal to 150  $\mu\text{m}$  and shorter than 200  $\mu\text{m}$ ;  
a gap formed between each of the first and second discharge electrode parts and the partition wall adjacent thereto is 60  $\mu\text{m}$  or greater; and  
the partition walls are formed with a pitch of 300  $\mu\text{m}$ .

15. (CURRENTLY AMENDED) ~~The plasma display device as claimed in claim 11,~~  
wherein:

A plasma display device having first and second substrates and a discharge gas filled therebetween, comprising:

first and second electrodes extending in parallel to each other on the first substrate; and  
first and second discharge electrode parts extending from the first and second electrodes, respectively, so as to oppose each other; and

a plurality of partition walls formed on the second substrate so as to extend perpendicularly to the first and second electrodes, the partition walls each separating an array of the first and second discharge electrode parts from an adjacent array of the first and second discharge electrode parts, wherein:

a discharge gap of a substantially constant width is formed between the opposing first and second discharge electrode parts, the discharge gap being defined by first and second edge parts of the opposing first and second discharge electrode parts, respectively;

the first and second edge parts have lengths longer than widths of the opposing first and second discharge electrode parts, the widths being measured in respective directions in which the first and second electrodes extend;

the first and second edge parts are defined by a plurality of straight line segments forming angles with respect to the respective directions in which the first and second electrodes extend;

the first and second discharge electrode parts extend toward each other in parallel with, but not overlapping, the partition walls;

the discharge gap has a length longer than or equal to 150  $\mu\text{m}$  and shorter than 200  $\mu\text{m}$ ;  
a gap formed between each of the first and second discharge electrode parts and the

Serial No. 09/929,048

Docket No.: 1614.1179

partition wall a-adjacent thereto is 60  $\mu$ m or greater; and  
the partition walls are formed with a pitch of 300  $\mu$ m.

16. (CANCELLED)

17. (CANCELLED)

18. (CURRENTLY AMENDED) ~~The plasma display device as claimed in claim 17,~~  
~~wherein:~~ A plasma display device having first and second substrates and a discharge gas filled  
therebetween, the plasma display device comprising:

first and second electrodes extending in parallel to each other on the first substrate; and  
first and second discharge electrode parts extending from the first and second  
electrodes, respectively, so as to oppose each other; and

a plurality of partition walls formed on the second substrate so as to extend  
perpendicularly to the first and second electrodes, the partition walls each separating an array  
of the first and second discharge electrode parts from an adjacent array of the first and second  
discharge electrode parts, wherein:

a discharge gap of a substantially constant width is formed between first and  
second discharge electrode parts, the discharge gap being defined by first and second  
edge parts of the opposing first and second discharge electrode parts, respectively,

the first and second edge parts have lengths longer than widths of the first and  
second discharge electrode parts, the widths being measured in respective directions in  
which the first and second electrodes extend,

the first edge part forms an angle  $\theta$  with respect to the direction in which the first  
electrode extends, the angle  $\theta$  satisfying a condition  $30^\circ \leq \theta \leq 60^\circ$ ,

each of the first and second edge parts comprises a single straight line or a  
plurality of straight line segments and is of a rectilinear configuration so that a distance  
between the first and second edge parts is substantially uniform; and

the first and second discharge electrode parts extend toward each other in  
parallel with, but not overlapping, the partition walls,

each of the first and second discharge electrode parts comprises a tip part  
having a substantially right triangular shape; and

each of the first and second edge parts is a hypotenuse of the tip part.

Serial No. 09/929,048

Docket No.: 1614.1179

19. (CURRENTLY AMENDED) ~~The plasma display device as claimed in claim 17,~~  
~~wherein: A plasma display device having first and second substrates and a discharge gas filled~~  
~~therebetween, the plasma display device comprising:~~

~~first and second electrodes extending in parallel to each other on the first substrate; and~~  
~~first and second discharge electrode parts extending from the first and second~~  
~~electrodes, respectively, so as to oppose each other; and~~

~~a plurality of partition walls formed on the second substrate so as to extend~~  
~~perpendicularly to the first and second electrodes, the partition walls each separating an array~~  
~~of the first and second discharge electrode parts from an adjacent array of the first and second~~  
~~discharge electrode parts, wherein:~~

~~a discharge gap of a substantially constant width is formed between first and~~  
~~second discharge electrode parts, the discharge gap being defined by first and second~~  
~~edge parts of the opposing first and second discharge electrode parts, respectively,~~

~~the first and second edge parts have lengths longer than widths of the first and~~  
~~second discharge electrode parts, the widths being measured in respective directions in~~  
~~which the first and second electrodes extend,~~

~~the first edge part forms an angle  $\theta$  with respect to the direction in which the first~~  
~~electrode extends, the angle  $\theta$  satisfying a condition  $30^\circ \leq \theta \leq 60^\circ$ ,~~

~~each of the first and second edge parts comprises single straight line or a~~  
~~plurality of straight line segments, and is of a rectilinear configuration so that a distance~~  
~~between the first and second edge parts is substantially uniform,~~

~~the first and second discharge electrode parts extend toward each other in~~  
~~parallel with, but not overlapping, the partition walls,~~

~~the first discharge electrode part comprises a first tip part having a convex shape~~  
~~and the second discharge electrode part comprises a second tip part having a concave~~  
~~shape, and~~

~~the first edge part comprises a plurality of oblique lines of the first tip part and the~~  
~~second edge part comprises a plurality of oblique lines of the second tip part.~~

20. (CURRENTLY AMENDED) The plasma display device as claimed in claim 17, wherein:

each of the first and second edge parts comprises a tip part having angularly bent ends;  
and

each of the first and second edge parts comprises a plurality of oblique lines of the tip

Serial No. 09/929,048  
part.

Docket No.: 1614.1179

21. (CANCELLED)

22. (NEW) The plasma display device as claimed in claim 15, wherein:  
each of the first and second edge parts comprises a tip part having angularly bent ends;  
and  
each of the first and second edge parts comprises a plurality of oblique lines of the tip  
part.